

621.87
Morse

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MORSE, WILLIAMS & Co.

BUILDERS OF

Passenger and Freight Elevators

OF EVERY DESCRIPTION.

1105 Frankford Avenue, PHILADELPHIA.

108 Liberty Street, NEW YORK.

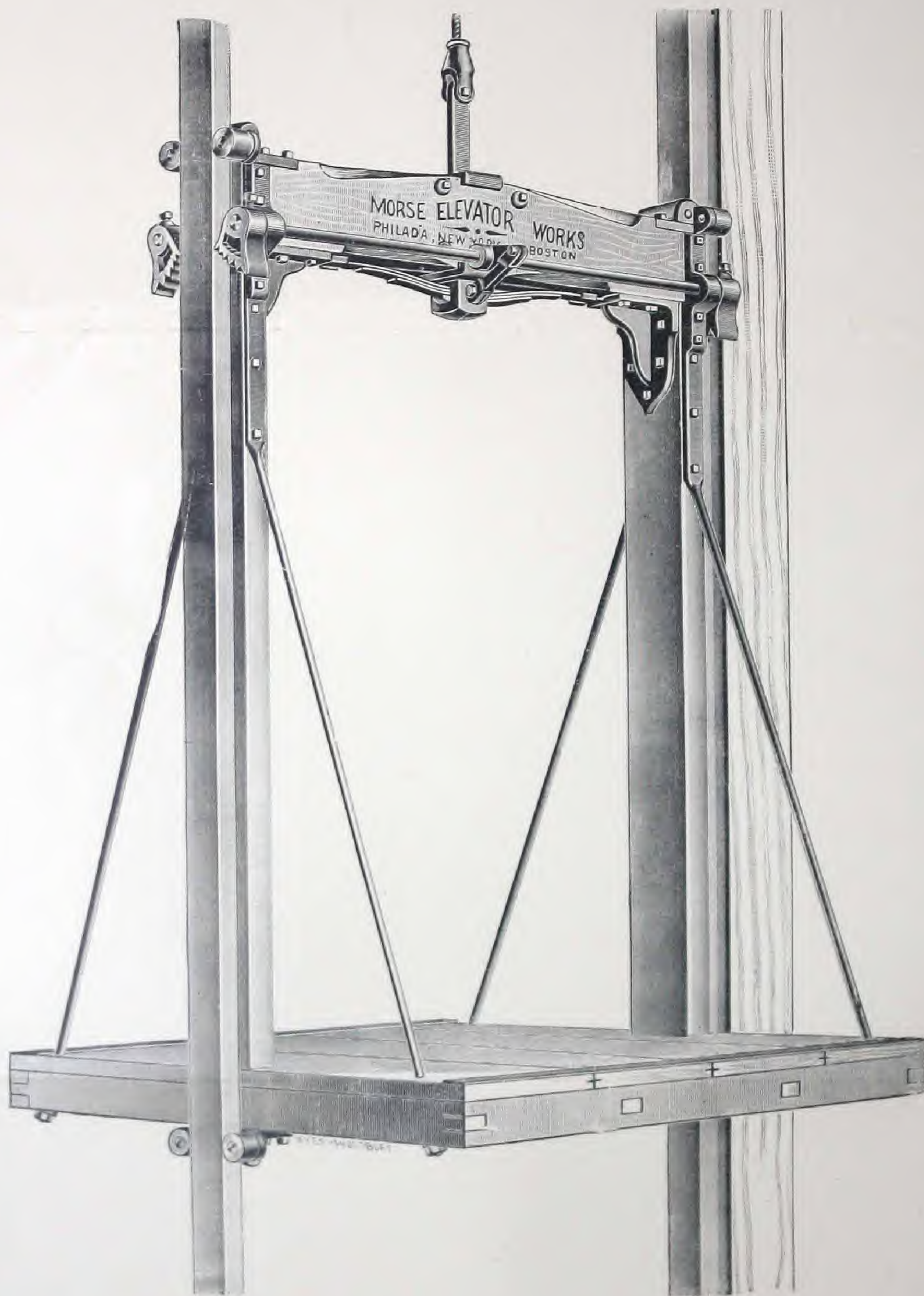
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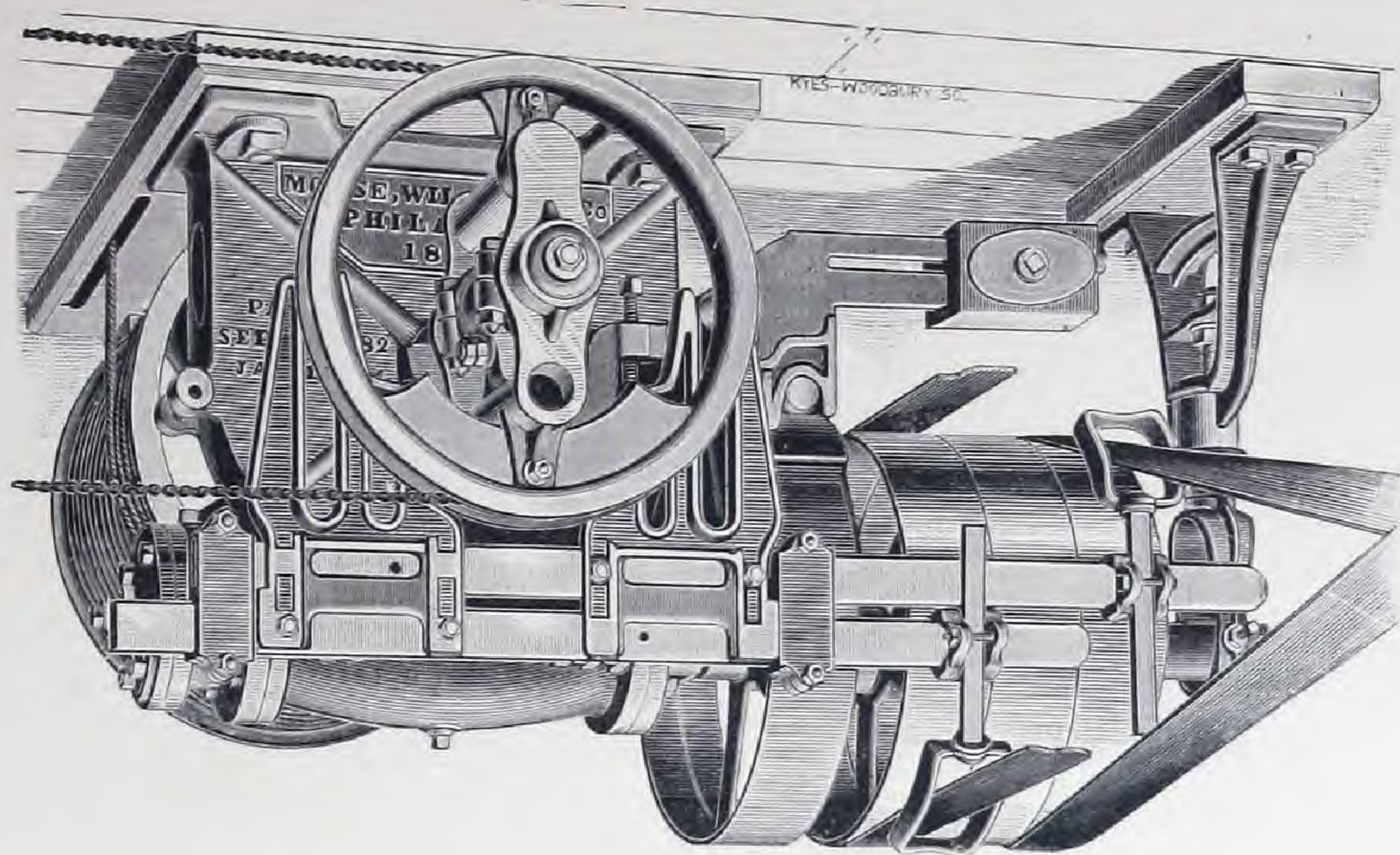
425 Spruce Street, SCRANTON.

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SIDE-POST FREIGHT ELEVATOR PLATFORM,
WITH IMPROVED SPRING GRIP SAFETY CLUTCH.



DESCRIPTION OF BELT-POWER SCREW HOIST.

THIS Machine has several new improvements, to which we would call attention.

FIRST.—To our Belt Shifter—which is a principal feature in a Power-Hoist. It is simple and not liable to get out of order, as it has no rack, gearing or link motion; and is so arranged that, while either of the belts are being shifted to the fast pulley, the other remains undisturbed. We also have an attachment which prevents the belts from shifting too far or reversing the machine; as it will stop central and leave the belts free from the fast pulley. As all parts are made interchangeable the machine can readily be changed from left to right hand, or *vice versa*. It also has a Slack Cable-Shifter—a very valuable device, which shifts the belt and applies the brake; stopping the machinery as soon as suspension-cable slacks up, when caused by the car being in any way obstructed in its descent.

SECOND.—The Automatic Stop (which can be set to stop the machine at any point—either hoisting or lowering) is so positive, that we can rely upon it, without depending upon the stops generally used on the shifting rod or cable.

THIRD.—The Brake is new in arrangement, is very powerful, and does not touch the pulley until it is brought into use; and, by means of a compound lever and weight, the wear is taken up automatically—thus obviating the necessity of frequent adjustment, as in other elevators.

FOURTH.—The Drum, on which the cable winds, is grooved; which prevents the cable from touching while winding—thus making it wear much longer.

FIFTH.—The Driving Worm (which runs at a high speed) is cut perfectly true, and is enclosed with a gear-wheel (which is also cut) in an oil-tight case or housing, and runs in oil.

SIXTH.—The Pulleys are made with large hubs, have a chamber for Albany grease or a similar lubricator, and are bushed with deoxidized bronze.

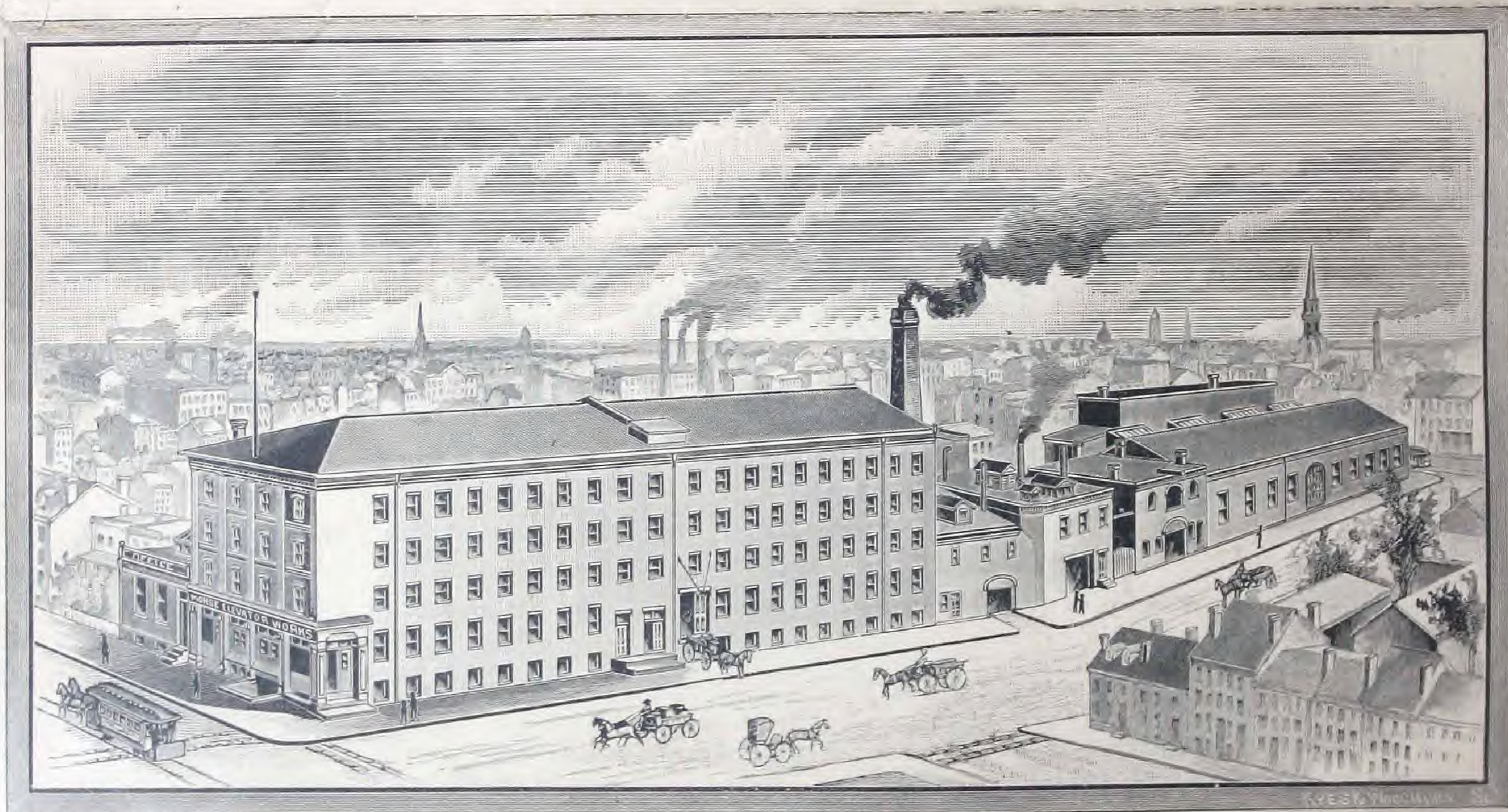
The Machine is fitted up in a mechanical and substantial manner.

THE IMPROVED HINDLEY WORM is cut from a blank, which is curved to correspond with the arc of the wheel. By making the worm or screw of this peculiar shape, it will readily be seen that there is a variation of pitch from point to root of tooth; this variation of distance from centre to centre of teeth in the worm exactly corresponds to the two diameters of teeth in the wheel; thus giving a perfect-bearing surface the whole length of the worm, and causing the two surfaces to travel at proper speed and with great steadiness of motion. The diameter of the worm is constantly changing as it revolves, and one tooth or thread does not follow exactly in the track of the one preceding it; which makes it impossible (if properly lubricated) to cut or unduly wear the teeth either of worm or wheel. The strain being distributed over so much bearing-surface, the motion is steadier, the speed can be increased fifty per cent. without risk, and friction is much less than in old-style machines; thereby consuming much less power.

THE SPRING GRIP SAFETY CLUTCH consists of two steel shafts on either side of the platform beam, on the ends of which are toothed eccentrics. The two shafts are carried in solid bearings, bolted through the stiles of car, and are connected to the pull-bar (to which the cable is attached) by links and collars. Should the cable break, the heavy coach-spring underneath the beam throws the pull-bar down, turns the shafts over, and causes the eccentrics to grip the guides instantly; and the heavier the load the tighter the grip.

OUR AUTOMATIC HATCH DOORS are the most perfect covers in the market, and are endorsed by underwriters generally, on account of lessening the risk of spreading of fire. The crank levers (which open the door as the car descends) are adjustable; so that, in case of a settling of the floors, shrinkage of wood-work, or wear in the joints, the levers can be quickly adjusted to open each door to its proper place, recessed in post. The patent joint between the door and post closes the opening perfectly.

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MORSE, WILLIAMS & CO.

WORKS:

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